

IN THE SPECIFICATION:

Please amend the paragraph beginning at page 3, line 25 as follows:

One of the advantages provided by such a process is that there is no disorganised destruction of the cell structure such as it is seen during a violent depressurization in the processes using a thermo-mechanical pulping step. In fact, contrary to the cases of thermo-mechanical pulping, in the process of the present invention, there is no exposure of the burst material to air, light or hot metallic sides. Thus there is no formation, or very limited formation of oxycellulose or non-desired functionalisations since such formation is ~~favoured~~, favoured in thermo-mechanical processes by the contact of the fibers to air and metals at the flashing temperature.

Please amend the paragraph beginning at page 4, line 16 as follows:

It is believed that the higher yields achieved in the present invention can be explained by ~~explain~~ the decrease of the suspended solids and dissolved pollutants in the water phase by more than half compared to a thermo-mechanical pulping process. It is further believed that the decrease is due to the absence of non-selective fragmentation in the process of the present invention and the absence of products of decomposition, which are generated by oxidation during and after the explosion in a thermo-mechanical pulping process.

Please amend the paragraph beginning at page 15, line 11 as follows:

Contrary to the thermo-mechanical pulping, this new process can prevent exposure of burst material to air, to light, or to the hot metallic sides. ~~Therefor~~ Therefore, there is no possible or very little formation of oxycelluloses, which is favoured in the presence of metals at these temperatures. Moreover, when the pulp is subjected to violent depressurization such as going from 350 psi to atmosphere pressure in a few fractions of second, such as in the case of thermo-mechanical pulping, the substance is treated in a destructive fashion. This also has an abrasive effect on the material of the reactor located near the exit, thus increasing the chance for the treated product to be contaminated with metallic particles.

Please amend the paragraph beginning at page 21, line 26 as follows:

The product obtained is loaded in a cylindrical stainless steel reactor. The reactor's volume is 2 cubic meters. ~~After having closed the reactor,~~ After the reactor is closed, it is directly fed with steam to obtain the pressure required for the treatment. In just a few minutes the temperature ~~into~~ in the reactor reaches 220° C.

Please amend the paragraph beginning at page 22, line 26 as follows:

The moist cellulose is fed to the hopper during 6 hours accordingly with the opening cycle of the ball valves. The cooked product ~~is~~ exits the reactor accordingly with water cycle. At the same time, water is injected into the vessel above the reactor. When the water reaches predetermined level into the vessel the ball valves opens and closes without loss of steam through the valve.